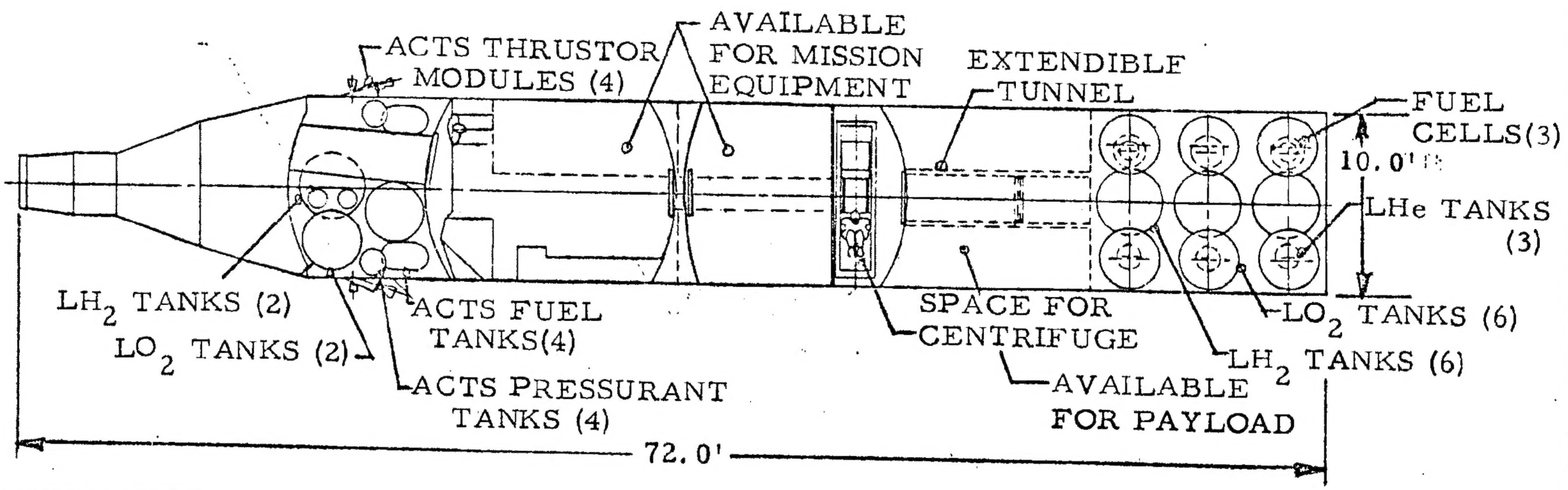
ETR

INTEGRAL LAUNCH DUAL COMPARTMENT LABORATORY

(CONFIGURATION AND PERFORMANCE)

- CONFIGURATION

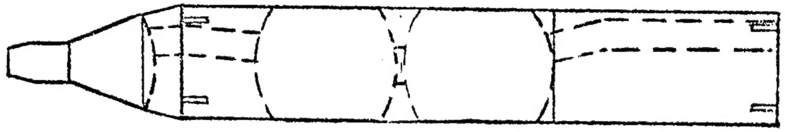


- PERFORMANCE

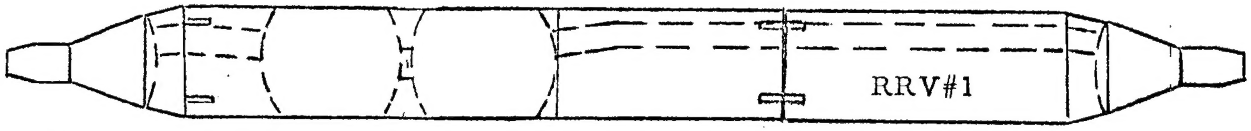
TOTAL PRESSURIZED VOLUME (SHIRT SLEEVE ENVIRONMENT)	2,000 FT^3
AVAILABLE PRESSURIZED VOLUME FOR CREW	1,200 FT^3
AVAILABLE PRESSURIZED VOLUME FOR EXPERIMENT·EQUIPMENT	600 FT^3
AVAILABLE UNPRESSURIZED VOLUME FOR EXPERIMENT EQUIPMENT	~ 700 FT^3
EXPERIMENT PAYLOAD CAPACITY (ETR, $i = 28.5^\circ$, 180 N M CIR)	~5,500 LB
(WTR, $i = 80^\circ$, 180 N M CIR)	~ 1,000 LB
ELECTRICAL POWER (AVERAGE)	1,650 WATTS*
MISSION DURATION	90 DAYS

*INCLUDES 200 WATTS FOR EXPERIMENTS

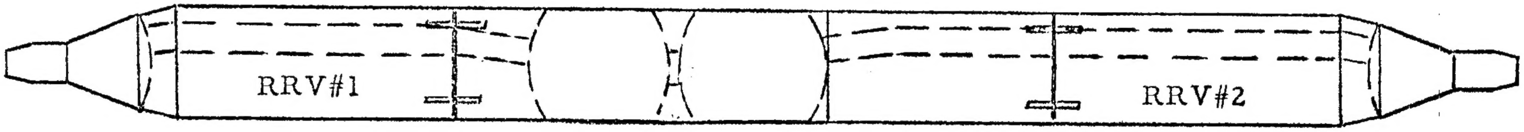
4 MAN DUAL COMPARTMENT LABORATORY



- INITIAL LAUNCH CONFIGURATION (2 MAN OPS)



- FIRST RENDEZVOUS RESUPPLY (4 MAN OPS)



- ON-ORBIT CONFIGURATION (4 MAN OPS)

RRV FUNCTIONS

- ACTS PROPULSION
- PRIME ELECTRICAL POWER
- LIFE SUPPORT EXPENDABLES
- EXPERIMENTS
- SPARE EQUIPMENT

LABORATORY FUNCTIONS

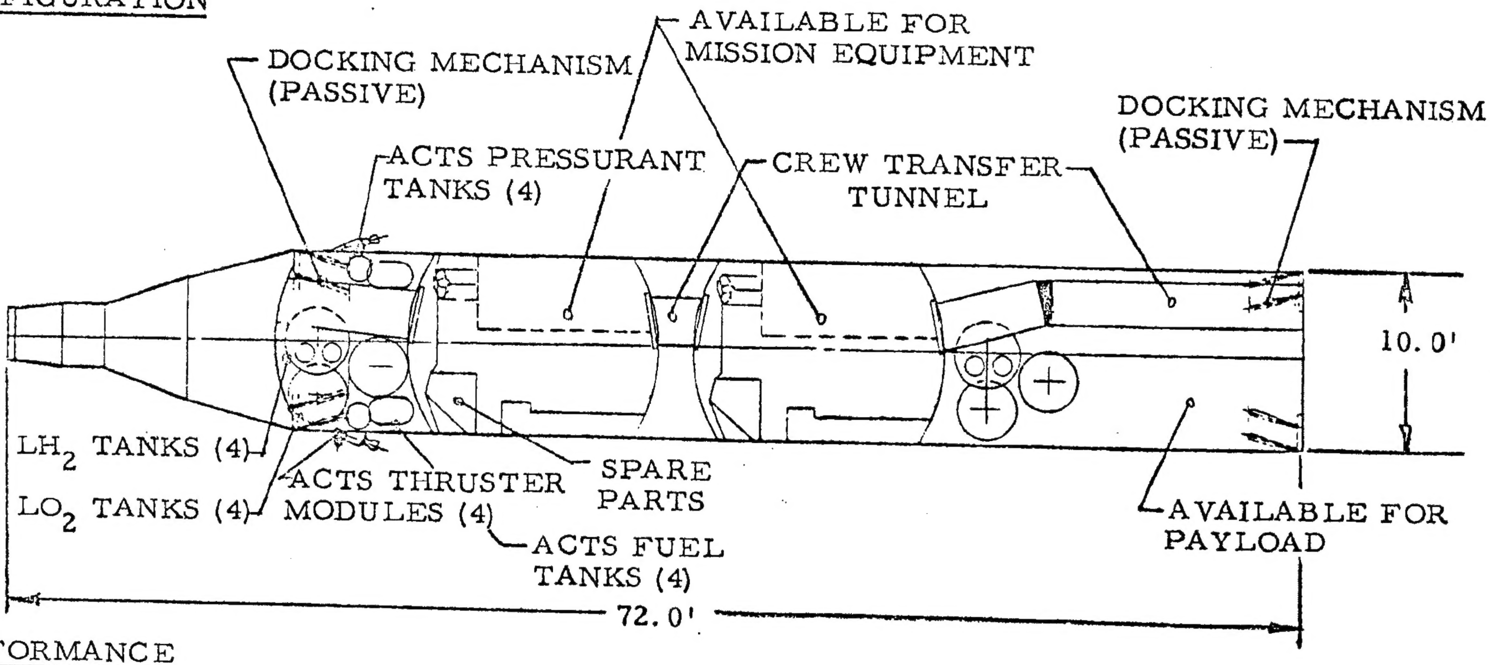
- LIFE SUPPORT/ENVIRONMENTAL CONTROL
- ACTS - REFERENCE
- COMMUNICATIONS/DATA
- BIO-MEDICAL EQUIPMENT
- EXPERIMENTS

#8

4 MAN DUAL COMPARTMENT LABORATORY

(CONFIGURATION AND PERFORMANCE)

- CONFIGURATION


AVAILABLE FOR MISSION EQUIPMENT
DOCKING MECHANISM (PASSIVE)
DOCKING MECHANISM (PASSIVE)
ACTS PRESSURANT TANKS (4)
CREW TRANSFER TUNNEL
10.0'
LH2 TANKS (4)
LO2 TANKS (4)
ACTS THRUSTER MODULES (4)
SPARE PARTS
ACTS FUEL TANKS (4)
AVAILABLE FOR PAYLOAD
72.0'

- PERFORMANCE

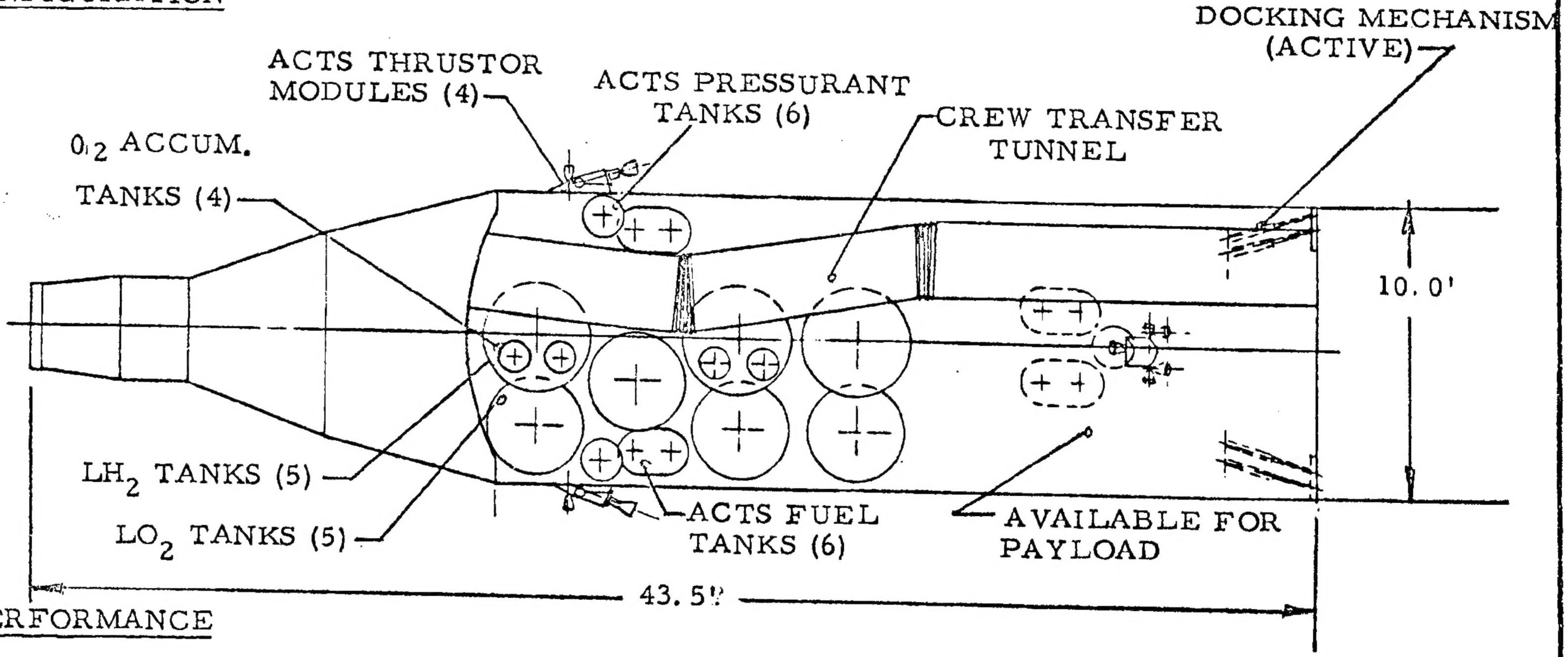
TOTAL PRESSURIZED VOLUME (SHIRT SLEEVE ENVIRONMENT)	2,000 FT^3
AVAILABLE PRESSURIZED VOLUME FOR CREW	1,200 FT^3
AVAILABLE PRESSURIZED VOLUME FOR EXPERIMENT EQUIPMENT	600 FT^3
AVAILABLE UNPRESSURIZED VOLUME FOR EXPERIMENT EQUIPMENT	950 FT^3
EXPERIMENT PAYLOAD CAPACITY (WTR, $i = 80°$, 180 N M CIR)	5,700 LBS
ELECTRICAL POWER (AVERAGE)	2,000 WATTS*
RESUPPLY CYCLE	60 DAYS

* 200 WATTS AVAILABLE FOR EXPERIMENTS

RENDEZVOUS RESUPPLY VEHICLE

(CONFIGURATION AND PERFORMANCE)

o CONFIGURATION



o PERFORMANCE

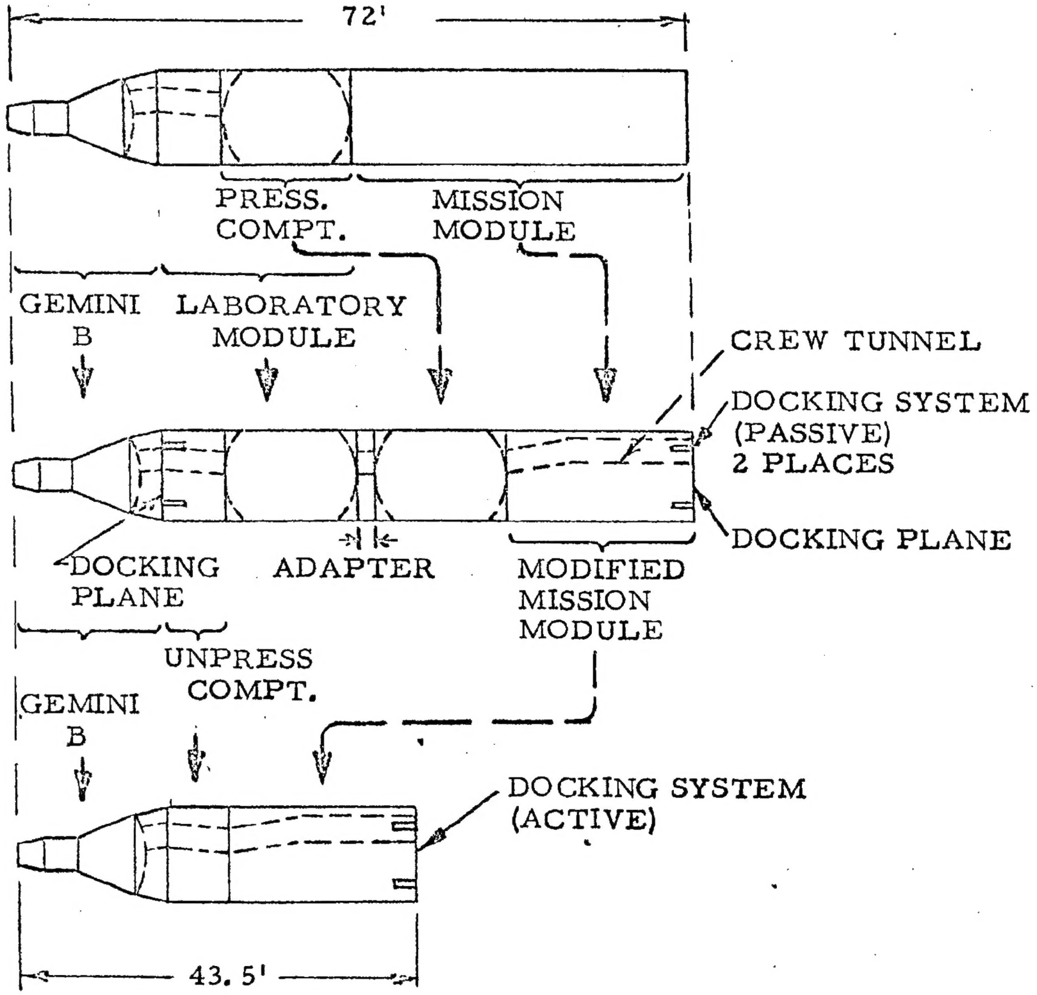
UNPRESSURIZED VOLUME FOR EXPERIMENT EQUIPMENT	2,000 FT^3
EXPERIMENT PAYLOAD CAPACITY (WTR, i = 80°, 180 N M CIR)	10,000 LBS
ELECTRICAL POWER (AVERAGE)	2,000 WATTS*
RESUPPLY CYCLE (TO SUPPLY 4 MAN CREW)	60 DAYS

*200 WATTS AVAILABLE FOR EXPERIMENTS

9/16/66

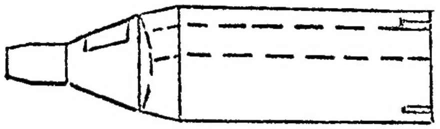
UTILIZATION OF MOL HARDWARE FOR 4 MAN DUAL COMPARTMENT LABORATORY CONFIGURATION

- O MOL BASELINE VEHICLE
- O RENDEZVOUS INITIAL VEHICLE (RIV)
- O RENDEZVOUS RESUPPLY VEHICLE (RRV)

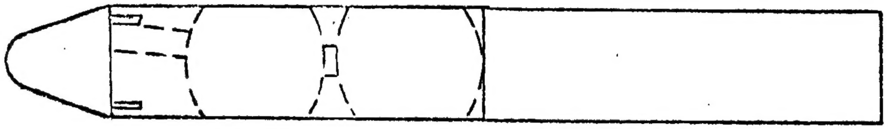


2 MAN DUAL COMPARTMENT LABORATORY CONFIGURATION

(COMBINED MISSION)

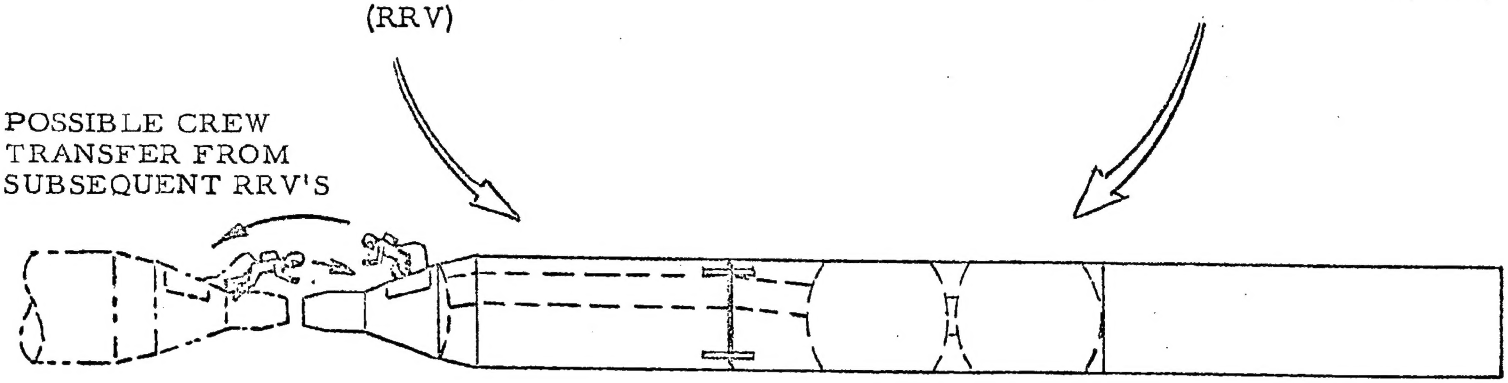


RENDEZVOUS
RESUPPLY VEHICLE
(RRV)



INITIAL LAUNCH RENDEZVOUS
LABORATORY VEHICLE (RIV)

POSSIBLE CREW
TRANSFER FROM
SUBSEQUENT RRV'S



RENDEZVOUS ORBITING VEHICLE
(ROV)

RRV FUNCTIONS

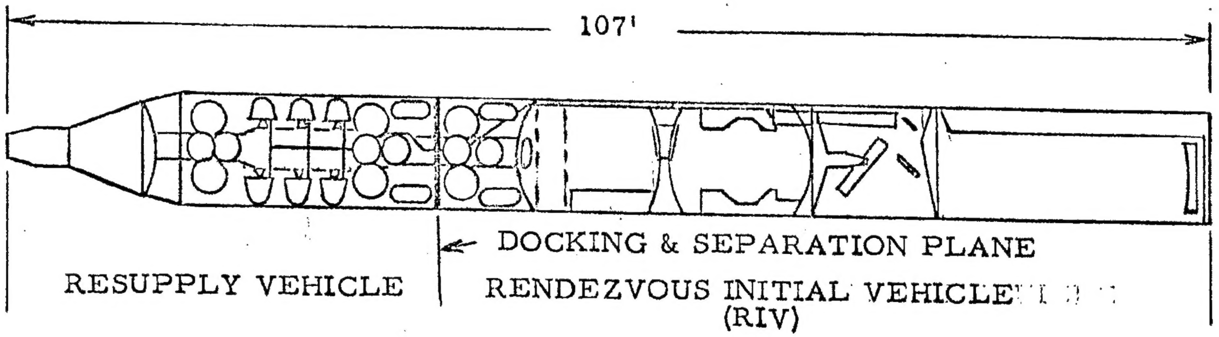
- CREW TRANSPORT VEHICLE
- ACTS PROPULSION
- PRIME POWER
- LIFE SUPPORT EXPENDABLES
- DATA RETURN SYSTEM
- SUBSYSTEM SPARES/REPLACEMENTS

R.I.V FUNCTIONS

- LIFE SUPPORT SYSTEM
- ATTITUDE CONTROL REF. ELECTRONICS
- COMMUNICATIONS AND DATA HANDLING
- ENVIRONMENTAL CONTROL
- PERFORMANCE DATA

2 MAN DUAL COMPARTMENT LABORATORY
CONFIGURATION AND PERFORMANCE SUMMARY
(COMBINED MISSION)

- **CONFIGURATION**



- **PERFORMANCE DATA**

TOTAL PRESSURIZED VOLUME (SHIRT SLEEVE ENVIRONMENT)	2,060 FT^3
AVAILABLE PRESSURIZED VOLUME FOR CREW	1,200 FT^3
AVAILABLE PRESSURIZED VOLUME FOR EXPERIMENT EQUIPMENT	210 FT^3
R. I. V. EXP. PAYLOAD CAPACITY ($i = 96.4^\circ$, 80/180 NM)	3,000 LBS
ELECTRICAL POWER (AVERAGE)	1,950 WATTS
RESUPPLY CYCLE	60 DAYS

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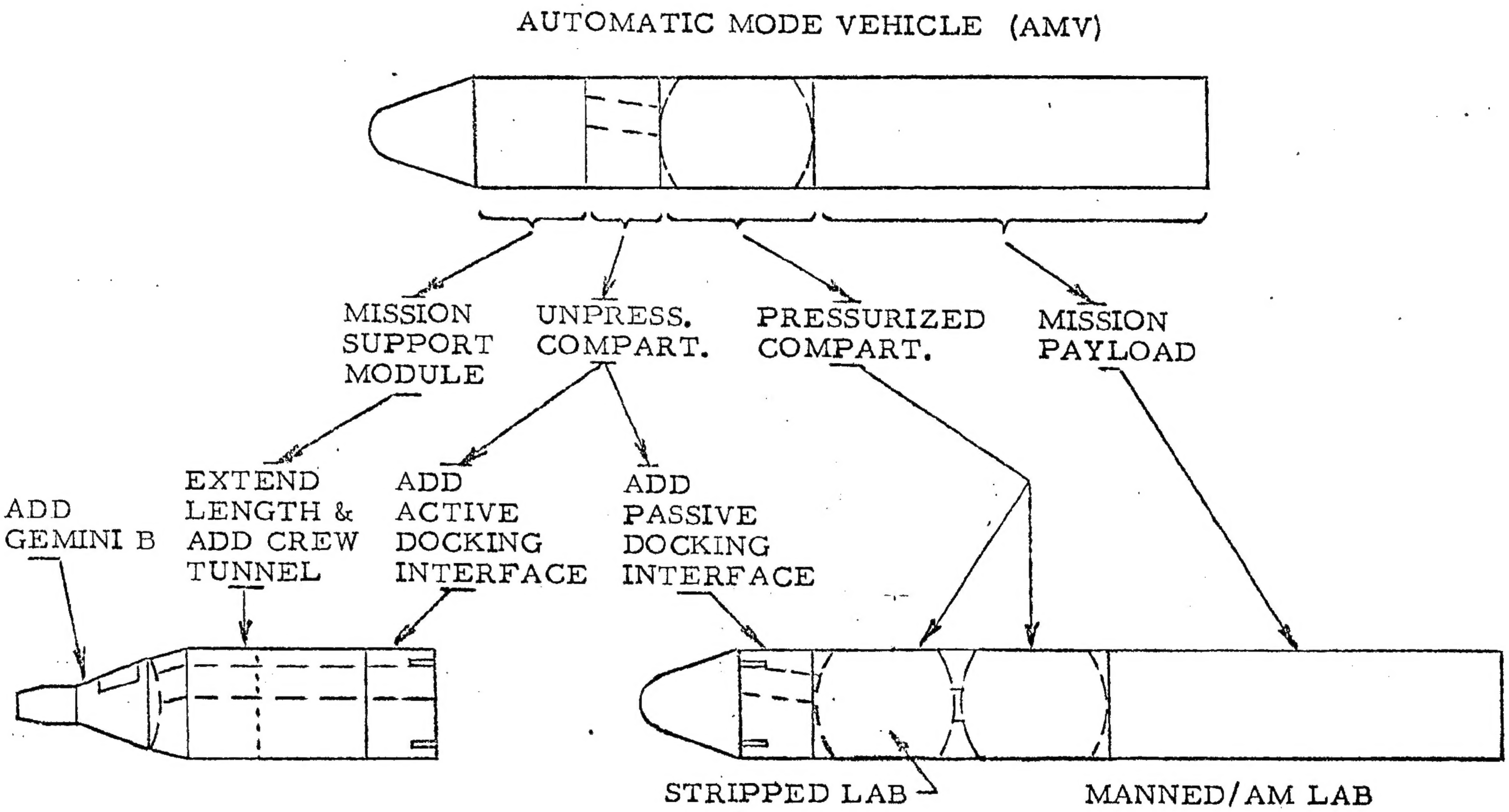
APPLICATION OF BASELINE COMPONENTS FOR 2 MAN DUAL COMPARTMENT LABORATORY

(COMBINED MISSION)


AUTOMATIC MODE VEHICLE (AMV)
MISSION SUPPORT MODULE
UNPRESS. COMPART.
PRESSURIZED COMPART.
MISSION PAYLOAD
ADD GEMINI B
EXTEND LENGTH & ADD CREW TUNNEL
ADD ACTIVE DOCKING INTERFACE
ADD PASSIVE DOCKING INTERFACE
STRIPPED LAB
MANNED/AM LAB

RENDEZVOUS RESUPPLY VEHICLE
(RRV)

RENDEZVOUS INITIAL VEHICLE
(RIV)